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**Examining the Hostile Media Effect as an Intergroup Phenomenon: The Role of Ingroup  
Identification and Status**

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### **Abstract**

The present approach conceptualizes the hostile media effect as an intergroup phenomenon. Two empirical studies, one quasi-experimental and one experimental, examine the hostile media effect in the context of the abortion debate. Both studies show that ingroup identification and group status qualify the hostile media effect. Pro-choice and pro-life group members perceived an identical newspaper article as biased against their own viewpoint only if they considered their ingroup to have a lower status in society than the outgroup. In addition, only group members with a stronger ingroup identification showed a hostile media effect, particularly because of self-investment components of ingroup identification. Taken together, the findings confirm the important influence of ingroup status and ingroup identification on the hostile media effect.

**Keywords:** hostile media effect, media bias, abortion, social identity, identification, ingroup, status, intergroup conflict

### **Examining the Hostile Media Effect as an Intergroup Phenomenon: The Role of Ingroup Identification and Status**

When mass media report controversial issues, presenting both positive and negative arguments on an issue, highly involved partisans tend to perceive identical coverage as biased either because it appears less favorable toward their own viewpoint or more favorable toward the opposing side. This phenomenon has been defined as the Hostile Media Effect (HME; Vallone, Ross, & Lepper, 1985). Gunther, Christen, Liebhart, and Chia (2001) conceptualized the effect as a perceptual bias, in that partisans of opposing groups may not actually see media coverage as hostile, in an absolute sense, but "see content as more hostile to, or less agreeable with, their own side of the issue relative to the way the other group sees it" (relative HME, p. 313)<sup>1</sup>. Since Vallone et al. (1985) first discussed the HME in the context of the Arab-Israeli conflict and the US-coverage about the Beirut massacre, it has been repeatedly confirmed in a range of other contexts, including elections (Duck, Terry, & Hogg, 1998; Huge & Glynn, 2010), the Bosnian war (Matheson & Dursun, 2001), Arab citizens living in Israel (Tsfati, 2007), debates about abortion (Giner-Sorolla & Chaiken, 1994), national security laws (Choi, Yang, & Chang, 2009) and genetically modified food (Gunther, Miller, & Liebhart, 2009; Gunther & Schmitt, 2004).

Researchers suggested various antecedents of the HME in the past. Gunther and Schmitt (2004; Gunther & Liebhart, 2006), for example, provided evidence that the effect is specific to mass communication. In their experimental study, the effect only occurred if people believed that mass audiences perceived the media stimulus, not small audiences. Other antecedents have been identified as well, including the source of the media coverage (Ariyanto, Hornsey, & Gallois, 2007; Arpan & Raney, 2003; Coe et al., 2008; Gunther & Liebhart, 2006; Reid, 2012), user factors like the extent of involvement or partisanship (e.g., Chia, Yong, Wong, & Koh, 2007; Choi et al., 2009), and cognitive processes underlying the interpretation of the media messages.

For example, several studies have shown that the HME does not result from selective recall of unfavorable content among partisans, but the tendency of partisans to cognitively categorize the same recalled arguments of an article as contrary to their own position (Giner-Sorolla & Chaiken, 1994; Gunther & Liebhart, 2006; Schmitt, Gunther, & Liebhart, 2004).

One of the more complete and coherent theoretical accounts of the HME conceptualizes the effect as an intergroup phenomenon (Ariyanto et al., 2007; Duck et al., 1998; Hoffner & Rehkoff, 2011; Matheson & Dursun, 2001; Reid, 2012), based on social identity theory (SIT; Tajfel & Turner, 1979). The present approach replicates and extends past findings by jointly examining two crucial factors from SIT, namely the influence of partisans' ingroup identification and ingroup status on the HME. For this purpose, the HME is examined in two studies involving the abortion debate. Study 1 provides a quasi-experimental analysis of the influence of ingroup identification and status of pro-life or pro-choice partisans on the HME. Study 2 extends these findings by experimentally manipulating status and by taking a more fine-grained look at ingroup identification based on the two-factor model proposed by Leach et al. (2008).

### **The HME as an Intergroup Phenomenon**

The HME may be conceptualized within SIT as a response to an ingroup threat. SIT (Tajfel & Turner, 1979, 1986) argues that social contexts may trigger perception of group membership or social identity in individuals. Media coverage, for instance, about controversial issues like abortion, may increase the salience of the social identity in readers highly engaged in this debate (Price, 1989). Individuals with a salient social identity categorize themselves as being a member of a group and try to achieve positive self esteem by perceiving their ingroup as positively distinct from the outgroup (Tajfel & Turner, 1979). A positive distinction implies that group members are motivated to see their ingroup as superior to the outgroup on valued dimensions. In the context of the HME, group members may be motivated to see that their

ingroup occupies a superior *moral* or *ideological* position in a conflict. However, arguments or information provided in the mass media may challenge the ingroup's ideological or moral legitimacy (Ellemers, Spears, & Doosje, 2002), and, thus, the positive distinctiveness of the group. Because partisans may hold naïve theories about the presumed influences of the mass media coverage about others (Matheson & Dursun, 2001, Tsfat, 2007; Vallone et al., 1985), they may fear that the coverage will weaken the position of their group in society. Accordingly, media coverage may pose a symbolic threat to their ingroup (Stephan & Renfro, 2002).

Partisans may cope with such ingroup threats by questioning the credibility and accuracy of the mass media coverage. According to Vallone et al. (1985), "partisans tend to perceive articles that are not totally supportive of their group's position as not accurate in light of truth and believe the discrepancy between the mediated account and the unmediated truth to be the intended result of hostile bias on the part of those responsible" (p. 584). As a consequence, partisans on both sides of a controversy may perceive identical mass media as being unfairly biased and relatively less favorable toward their own side, or more favorable toward the other group. Taken together, "fair or objective coverage is denigrated as biased because it does not service group members' needs to see their group as positively distinct from the outgroup" (Ariyanto et al., 2007, p. 267). In the present approach, this reasoning is examined in the context of the ideological or moral conflict about abortion. We hypothesize that pro-choice and pro-life partisan readers downgrade a newspaper article about abortion as being biased and relatively less agreeable toward their own side (H1).

**Ingroup identification.** Controversial media coverage may imply a stronger ingroup threat the more partisans identify with their ingroup. Within SIT, ingroup identification is understood as "the perception of oneness or belongingness to some human aggregate" (Ashforth & Mael, 1989, p. 21) and reflects an individual's cognitive and affective attachment to a group

(Leach et al., 2008; Tajfel, 1982). Integrating previous research in that area, Leach et al. (2008) propose that different aspects of ingroup identification can be grouped into two general dimensions, namely self-investment (e.g., satisfaction, solidarity, and centrality of ingroup) and self-definition (e.g., self-stereotyping and perceived ingroup homogeneity). Based on an extensive review of empirical research, Ellemers et al. (2002) find that group members respond differently to ingroup threats, depending on their level of identification. High identifiers engage in defensive (e.g., downplaying the threatening information) and competitive behavior (e.g., derogating the outgroup). Low identifiers, in contrast, tend to distance themselves from the group when their ingroup is threatened. These findings suggest that the extent to which individuals identify with their ingroup also plays an important role in explaining the HME. High identifiers especially may cope with ingroup threats by downplaying the credibility of the presented negative image of their group. Accordingly, particular individuals that strongly identify with their ingroup should be susceptible to show a HME.

In line with this assumption, past studies suggest that the HME is positively related to the extent to which partisans identify with their ingroup. Several studies have confirmed this relationship in the context of political controversies, a few others in the context of ethnic conflicts. Duck et al. (1998) examined hostile perceptions of the mass media coverage of the 1996 Australian federal election among politically aligned voters. They found that high identifiers perceived the media coverage as biased in favor of the outgroup, whereas low identifiers perceived the same coverage as fair. Similarly, Eveland and Shah (2003) found that political partisans in the US tended to perceive news media as more biased against their own views the more they identified with their political party (see also Dalton, Beck, & Huckfeldt, 1998). Focusing on an ethnic conflict, Matheson and Dursun (2001) found that Bosnian Serb and Muslim partisans perceived newspaper articles about the Sarajevo bombing to be biased toward

the opposing side the more they identified with their ingroup. In another study examining newspaper coverage of an ethnic conflict, Ariyanto et al. (2007) found that the HME was more pronounced among Muslim and Christian participants that strongly identified with their ingroup. Taken together, these findings suggest that the HME increases with ingroup identification. Accordingly, in the abortion debate, we can expect that the more pro-choice or pro-life partisans identify with their ingroup, the more they perceive a balanced newspaper article about abortion as being biased and relatively less agreeable toward their own side (H2).

**Ingroup status.** Next to ingroup identification, ingroup status may be an important group-related factor influencing the HME. The HME may be more pronounced among group members that perceive their ingroup to hold a lower group status than the outgroup. Within SIT, group status refers to how groups relate to each other on a given comparison dimension. Dominant groups have relatively high status or *prestige*, because they compare positively to subordinate groups on valued dimensions like wealth or knowledge (Tajfel & Turner, 1986). Ingroup status differs from the concept of ingroup identification. Ingroup identification refers to group members' cognitive and affective attachment to their group. In contrast, ingroup status builds on the comparison to other groups and refers to the perceived position of the ingroup on a valued dimension (e.g., competence, wealth, knowledge, morality) relative to another group.

Group members cope differently with status-related ingroup threats, depending on the status level and on the legitimacy and stability of perceived status differences. Bettencourt, Dorr, Charlton, and Hume (2001) and Ellemers et al. (2002) review related research suggesting that members of low-status groups tend to respond competitively to ingroup threats if they perceive status differences as unstable and illegitimate. Similarly to this SIT account, the theory of low-status compensation (Henry, 2009) argues that members of low-status groups in society must manage a permanent threat to their self-worth. One typical strategy is the vigilant defense of



psychological self-worth by insisting on respectful treatment and responding aggressively when insulted., "Die-hard" group members with a high identification are especially likely to respond defensively on an incidental status threat and to downplay the threat.

In the context of public opinion and controversial societal debates, group status may often be inferred by the perceived acceptance of a group's ideological position in society. Dominant groups hold ideological positions that are presumably widely supported in society, whereas subordinate groups hold positions that are presumably only shared by a minority. Members of low status groups may feel greater pressure as they struggle to maintain a positively distinct group identity, because of the lacking societal support of their position. They may tend to engage in competitive intergroup behavior and may also especially insist on respectful treatment in the media. Accordingly, partisan members of low-status groups may perceive media coverage that imposes an ingroup threat to be more hostile (or less supportive) than partisan members of high-status groups. However, to date, only one study provided preliminary evidence for this possibility. In a study by Duck et al. (1998), the HME was stronger among voters identifying with a subordinate political party in an Australian election campaign than among voters that identified with the ruling party that was expected to win the election. However, the study only indirectly inferred perceived group status: the authors presumed that voters of the ruling political party perceived themselves as group members of a high status group, and that members of the opposing party perceived themselves as members of a low status group. In addition, due to the correlational nature of the study, it is possible that the observed effect of group status on HME was spurious. Partisanship may have been confounded with other factors than group status that influence HME (see also Hoffner & Rehkoff, 2011). These methodological limitations may also explain an unexpected finding of the study, namely that participants aligned with the losing party

of the election (that became members of a low-status group) showed a weaker HME than voters aligned with the winning party (that became members of a high-status group) after the election.

The scarcity of and limitations in existing research call for further examinations of the impact of group status on HME. In the context of the abortion debate, we hypothesize that pro-choice or pro-life group members perceive a newspaper article about abortion as being biased against their own viewpoint if they consider the status of their ingroup to be low, but not if they consider it to be high (H3).

**Study overview.** The present approach includes two studies to test the hypotheses. Study 1 employed an online survey of partisan pro-choice or pro-life group members to conduct a quasi-experimental examination of the influence of ingroup identification and ingroup status on HME. Accordingly, Study 1 replicated and extended previous findings within the context of the abortion debate. Study 2 deepened this analysis by examining the influence of different dimensions of ingroup identification (Leach et al. 2008) and by experimentally manipulating group status among pro-choice and pro-life individuals.

## Study 1

### Method

**Procedure and sample.** The analyses of this study are based on an online survey conducted in 2009. Respondents were recruited via the Internet with the support of several U.K. and U.S.-based organizations that were either pro-choice or pro-life (e.g. Pro-choice Forum, Students for Life of America). The final sample consisted of  $N = 108$  respondents. A majority of the sample was female (67.9%). The average age was 35 years. Most people in the sample were employed (51.4%) and not married (53.2%). A majority of the sample was highly educated; 41.3% of all respondents had a master's degree or a PhD.

Respondents clicked on a web link to start the online questionnaire. After a brief introduction and general instructions, respondents received questions about issue involvement gauging their position toward abortion (i.e. pro-choice or pro-life), and identification with the ingroup and outgroup. A group status manipulation followed. Participants received a counterfeit report about a (fictional) research finding that creative intelligence is an important predictor in one's career and success in life (following Platow, Byrne, & Ryan, 2005). Half of the participants were presented a graph indicating that in general pro-life people scored higher on creative intelligence and the other half were presented a graph indicating that in general pro-choice people scored higher on creative intelligence. After the treatment, respondents were exposed to a counterfeit article about abortion. In a pre-test, the article was perceived as neutral by four non-partisans. The article was pasted into a page of a newspaper, in order to make it look like a copy from a real news article. After participants read the article, they filled out measures of perceived message tendency, perceived group status, and socio-demographics.

**Measures. *Perceived message tendency (PMT)*.** Perceived message tendency was measured by a scale of Gunther and Schmitt (2004). The first three items measured whether the respondent perceived the article to be biased, e.g. "Would you say that the portrayal of abortion in this article was strictly neutral, or was it biased in favor of one side or the other?" Responses were recorded on a seven-point scale ranging from -3 (*strongly biased against availability of abortion*) to +3 (*strongly biased in favor of availability of abortion*), with 0 (*neutral*) as midpoint. For the next two items respondents had to indicate what percentage of the article was in favor or against the availability of abortion. The response scale ranged from 1 (0%) to 11 (100%). Another item measured whether the journalist was neutral or biased in favor or against the availability of abortion (-3 = *strongly biased against availability of abortion*, +3 = *strongly biased in favor of availability of abortion*). The two 11-point scale items were transformed so

that they could be collapsed with the other four seven-point scale items into a mean-index ( $\alpha = .91$ ).<sup>2</sup> Higher scores on this index reflected that the article was perceived as more pro-choice (although irrelevant for the inference of the HME in the present context, a zero score indicated that the article was perceived as neutral and impartial). On average, the article was not perceived as neutral, but as slightly biased toward pro-life,  $M = -.37$ ,  $SD = 1.22$ ,  $t(107) = -2.19$ ,  $p < .05$ , Cohen's  $d = 0.21$ .

***Pro-life or pro-choice.*** Respondents were asked to indicate whether they were more against (pro-life) or in favor of the availability of abortion (pro-choice). Based on their answer, respondents were assigned to one of two groups. This resulted in 52 people that were pro-life and 56 people that were pro-choice.

***Ingroup identification.*** In order to measure respondents' identification with their ingroup (pro-life or pro-choice), we used a three item-scale. These items were adapted from a four-item scale of Doosje, Ellemers and Spears (1995). Three items measured identification with people who were pro-choice, e.g. "I identify myself with people who are in favor of the possibility of abortion". Another three items measured identification with people who are pro-life, e.g. "I see myself as a member of the group of people that is against the possibility of abortion". Respondents used a 7-point response scale ranging from 1 (*not at all*) to 7 (*very much*). Items were combined into a reliable index that assessed ingroup identification ( $\alpha = .91$ ). Higher scores indicated a stronger identification with the group that supports the respondent's stance toward abortion. On average, ingroup identification was higher among pro-life respondents ( $M = 6.19$ ;  $SD = 1.48$ ) than pro-choice respondents ( $M = 5.42$ ;  $SD = 1.43$ ;  $t(106) = 2.75$ ,  $p < .01$ , Cohen's  $d = 0.53$ ). For further calculations, scores were centered around the mean.

***Group status.*** Group status was measured with a single item "please indicate who you believe has a higher status in society? people in favor of abortion / people against abortion" (59%

selected pro-choice, 41% selected pro-life). Responses were recoded in such a way that people that believed that their ingroup had a higher status in society scored +1 (61% of all respondents) and people that believed the outgroup had a higher status scored -1 (39% of all respondents). The percentage of participants perceiving a higher status of their ingroup was notably higher among pro-choice (60%) than pro-life individuals (41%) in the present sample. However, this difference was not significant,  $\chi^2(1, N = 108) = 3.56, ns$ . Status was also not significantly correlated with ingroup identification ( $r = -.05, ns$ ).

## Results

**Preliminary findings.** Before the reporting of the actual hypotheses tests, it is interesting to note that several email-responses we received from pro-choice and pro-life institutions on our request to promote our survey already revealed a hostile-media effect. Both sides tended to perceive the survey as being biased against their own side. For example, a representative from “Pro-Choice Northern Ireland” rejected our request with the following argument: *“I took a brief look at your survey and found it to be badly constructed, poorly written and heavily biased against abortion from the outset. Pro-Choice Northern Ireland will not be taking part in your ‘research’”*. In contrast, some pro-life organizations rejected our request as they perceived the survey to be biased in favor of abortion. For instance, a spokesperson of “United for Life” argued that: *“United for Life is unable to help you with your questionnaire [...] Unfortunately the questions on your questionnaire seem to treat the issue of killing children by abortion as if the killing of children by abortion is a legitimate option. [...] Your questions seem to be phrased as if abortion were not a moral issue.”* These examples provided preliminary evidence that the issue of abortion and the targeted sample seemed well suited to examine the HME.

**Manipulation check.** A chi-square test revealed that the status manipulation failed,  $\chi^2 (1, N = 108) = 2.23, ns$ . Sixty-eight percent of all participants in the high status condition believed that their ingroup had a higher status in society. However, this number was not significantly different to the 55% of all participants in the low status condition that also believed in a high ingroup status. We therefore opted for a quasi-experimental analysis of the data and used the manipulation check as a measure for respondents' perceived group status.

**Test of hypotheses.** Hypothesis 1 predicted that both pro-choice and pro-life partisans downgrade a newspaper article about abortion by perceiving it as being biased and relatively less favorable toward their own side. Hypothesis 2 predicted that this effect would be moderated by ingroup identification. Both hypotheses were tested in a single moderated regression. We entered respondents' pro-life or pro-choice group membership and ingroup identification (centered around the mean) in a first step and the interaction term (pro-choice / pro-life X ingroup identification) in a second step as predictors of PMT (see Aiken & West, 1991). Because perceptions of ingroup status differed slightly (albeit non-significantly) among the pro-life vs. pro-choice respondents in the present sample, we decided to add status as a covariate in both steps of the present analysis. Results of the first step show that the predictors had a significant effect on PMT,  $R^2 = .13$ ;  $F(3, 104) = 5.07$ ;  $p < .01$ . Stance toward abortion had a significant effect on PMT;  $b = -.47$ ,  $SE = .12$ ,  $t = -3.89$ ,  $p < .01$ . Pro-life ( $M = .21$ ) and especially pro-choice partisans ( $M = -.74$ ) perceived the newspaper article to be less favorable toward their own side.<sup>3</sup> This result confirms Hypothesis 1. Ingroup identification,  $b = -.1$ ,  $ns$ , and status,  $b = -.08$ ,  $ns$ , had no significant effect on PMT. The second step of the regression,  $\Delta R^2 = .05$ ;  $\Delta F = 6.05$ ;  $p < .05$ , yielded, however, a significant interaction effect,  $b = -.20$ ,  $SE = .08$ ,  $t = -2.46$ ,  $p < .05$ . The effect of this moderation was small,  $f^2 = .061$ .<sup>4</sup> In order to interpret the obtained interaction effect,

simple slope analyses were conducted using the SPSS PROCESS macro developed by Hayes (2012). The simple slopes of the effect of pro-choice / pro-life on PMT were examined for high identifiers (i.e., 1 *SD* above the mean of the moderator) versus low identifiers (i.e., 1 *SD* below the mean of the moderator). As displayed in Figure 1, we found no significant relation for low identifiers between pro-life / pro-choice and PMT,  $b = -.19$ , *ns*. For high identifiers, however, there was a highly significant negative relation between pro-life / pro-choice and PMT,  $b = -.77$ ,  $SE = 0.17$ ,  $t = -4.55$ ,  $p < .01$ . Requesting Johnson-Neyman regions of significance showed that the moderation turned significant at identification scores of and above  $-1.00$ . Rerunning the moderated regression without status as a covariate produced the same findings. These results confirm Hypothesis 2 and suggest that the HME only occurs among members with a considerably higher ingroup identification.

[Please insert Figure 1 about here.]

Hypothesis 3 predicted a moderating effect of group status on the relation between pro-life or pro-choice and PMT. In order to test this hypothesis, we entered respondents' pro-life / pro-choice score and group status (both dichotomous variables) in a first step of a regression and the interaction term (pro-life / pro-choice X group status) in a second step as predictors of PMT. Because ingroup identification significantly differed among pro-life vs. pro-choice respondents in the present sample, we added ingroup identification as a covariate in both steps of the present analysis. Results of the first step show that the predictors had a significant effect on PMT,  $R^2 = .13$ ,  $F(3, 107) = 5.07$ ;  $p < .01$ . Stance toward abortion had again a significant effect on PMT;  $b = -.47$ ,  $SE = .12$ ,  $t = -3.89$ ,  $p < .01$ . Ingroup identification,  $b = -.10$ , *ns*, and group status had no significant effect on PMT,  $b = .08$ , *ns*. However, the second step of the regression,  $\Delta R^2 = .08$ ;  $\Delta F = 10.49$ ;  $p < .01$ , yielded a significant interaction effect;  $b = .38$ ,  $SE = .12$ ,  $t = 3.24$ ,  $p < .01$ . The size of this moderation was small,  $f^2 = 0.101$ . The interaction effect was further examined in

simple slope analyses. As displayed in Figure 2, probing the obtained interaction effect revealed no significant relation between pro-life / pro-choice and PMT for people that perceived that their ingroup had a higher status in society,  $b = -.19$ , *ns*. For groups that perceived the ingroup to have a lower status in society, however, we found a significant negative relation between their pro-choice / pro-life point of view and PMT,  $b = -.95$ ,  $SE = .19$ ,  $t = -5.06$ ,  $p < .01$ . An additional moderated regression showed that the results did not change if ingroup identification was not added as a covariate.<sup>5</sup> These findings support Hypothesis 3 and indicate that the HME occurred only among group members that believed that their ingroup had a lower status in society (estimated means are displayed in Figure 2).

[Please insert Figure 2 about here.]

## Study 2

Taken together, Study 1 documented that the HME occurs among partisans with a stronger ingroup identification and a lower perceived group status. Based on a direct assessment of group status, the study is the first to show that the HME occurs if group members perceive a low ingroup status (c.f. Duck et al., 1998). However, because the experimental manipulation failed, the findings about group status were only based on correlational evidence in Study 1. Accordingly, a primary goal of Study 2 was to re-examine the causal influence of group status on the HME in a controlled experiment. In addition, we deepened the examination of the effect of ingroup identification on HME in Study 2. Previous studies have already shown that a stronger ingroup identification intensifies the HME in ethnic or political conflicts (e.g., Ariyanto et al., 2007; Duck et al., 1998); Study 1 replicated this finding in the context of the moral and ideological conflict about abortion. For the purpose of the replication, Study 1 applied a very similar conceptualization and measure of ingroup identification as previous studies (e.g., Matheson & Dursun, 2001) and examined ingroup identification as a unidimensional concept. A



second goal of Study 2 was therefore to examine the specific effects of the two dimensions of ingroup identification identified by Leach et al. (2008) on the HME.

Leach et al. (2008) argue that ingroup identification can be split into two general dimensions, namely the extent of an individual's group-level self-investment and group-level self-definition. The self-investment dimension captures members' satisfaction with their ingroup ("positive feelings about the group and one's membership in it", p. 146), their solidarity ("a psychological bond with, and commitment to, fellow ingroup members", p. 147), and the centrality of their ingroup ("the group [as] a central aspect of the individual's self-concept", p. 147). In contrast, the self-definition dimension captures the extent of group members' self-stereotyping ("a 'depersonalized' self-perception, whereby individuals come to 'self-stereotype' themselves as similar to other members of their ingroup", p. 146), and perceived ingroup homogeneity ("the degree to which individuals perceive their entire group as sharing commonalities", p. 146). Group memberships provide structure and orientation for individuals. Self-definition reflects the rather automatic and involuntary aspects of this mechanism. The cognitive aspects of self-definition are typically automatically triggered if individuals categorize themselves as group members (e.g., based on skin color or other perceived similarities). In contrast, self-investment reflects the perceived level of voluntary dedication to a group.

Both dimensions may differ in the extent they trigger defensive responses to an ingroup threat communicated by the media, and thus the HME. The HME may not simply depend on partisans' group membership and their associated levels of self-definition, but on the extent to which they are actually proud and satisfied members of a group. Past studies about the HME usually regarded partisans as individuals that pro-actively engage in a group and, thus, show a high level of self-investment. For example, being a member of a pro-life group may be a central part of a partisan's self-concept, if that partisan actively seeks to ban abortions. The HME often

occurs in heated debates about ideological or moral issues like conflicts about genetically modified food or abortion. In these conflicts, partisans usually deliberately take sides and, thus, voluntarily become highly committed members of a group. Accordingly, self-investment may be a more important predictor of the HME than self-definition, because the self-worth of highly invested members that deliberately decided to root for a group is at stake if mass media challenge the positive distinctiveness of that group.

In support of this argument, Leach et al. (2008) find evidence that self-investment but not self-definition leads to defense against threats to an ingroup and its image. In a study, they confronted group members with an article that communicated an ingroup threat in form of a misdeed committed by ingroup members against an outgroup. The study showed that the two dimensions of ingroup identification lead to different effects. The higher the solidarity component of self-investment, the more group members engaged in defensive strategies and tended to justify the misdeed as legitimate. In contrast, the more group members were psychologically included into their group based on the self-stereotyping component of self-definition, the more they felt guilty about the misdeed of their ingroup. These results suggest that self-investment but not self-definition may trigger defensive responses to ingroup threats communicated by the mass media, and thus the HME (revised H2).

## Method

**Procedure and sample.** Study 2 followed a similar approach as Study 1. The analyses of Study 2 are based on an online survey conducted in 2010. Respondents of this study were recruited via the Internet with the support of a number of Dutch-based organizations that were either pro-choice or pro-life (e.g. Christians for Truth, Women on Waves), as well as via a university-based recruitment tool. The final sample consisted of  $N = 204$  respondents (valid cases). A majority of the sample was female (70.1%). The average age was 21.42 years ( $SD =$

7.59, age range from 18 to 73 years). Most people in the sample were not married (88.7%), did not affiliate themselves with any religion or religious group (60.3%), and never or rarely visited services at a church or mosque (75.5%). A majority of the sample was highly educated; 57.8% of all respondents had completed a university degree.

Respondents were asked to click on a web link to start the online questionnaire. After an introduction and general instructions, respondents answered questions about issue involvement (indicating whether they were pro-life or pro-choice) and identification with the ingroup before they were randomly assigned to a group status manipulation. Group status was manipulated by showing half of the respondents that had indicated they were pro-choice fictional results from a report stating that a study by a European research institute had shown that the majority of 18,000 surveyed highly educated people shared the point of view of people that were pro-choice, whereas only a minority did not (pro-choice / high status). The other half of the pro-choice respondents received a counterfeit report that 18,000 highly educated people had no understanding for the point of view of people that were pro-choice, whereas only a minority did (pro-choice / low status). The same procedure was applied to respondents that indicated they were pro-life. After the treatment, respondents were exposed to an article similar to the article used in Study 1, but translated into Dutch. After this, perceived message tendency was measured and manipulation checks were performed. Finally, socio-demographics were reported.

**Measures.** PMT ( $\alpha = .82$ ,  $M = -.06$ ,  $SD = 0.84$ , difference to zero midpoint:  $t(203) = -1.02$ , *ns*, Cohen's  $d = 0.07$ ) and respondents' stance toward abortion (84.3% pro-choice and 15.7% pro-life) were measured in the same manner as in Study 1.

*Ingroup identification.* A different scale to measure identification with respectively the pro-choice or pro-life movement was used compared to Study 1. Following Leach et al. (2008), two different components of ingroup identification were measured on a seven-point response

scale ranging from one (*not at all*) to seven (*very much*). Ingroup-related self-investment ( $\alpha = .91$ ,  $M = 3.57$ ,  $SD = 1.25$ ) was assessed by 10 items referring to solidarity (e.g. “I feel a bond with [ingroup]”), satisfaction (e.g. “I am glad to be [ingroup]”), and centrality (e.g. “The fact that I am [ingroup] is an important part of my identity”). Ingroup-related self-definition ( $\alpha = .87$ ,  $M = 3.14$ ,  $SD = 1.24$ ) was assessed by four items referring to individual self-stereotyping (e.g. “I have a lot in common with the average [ingroup] person”), and ingroup homogeneity (e.g. “[ingroup] people have a lot in common with each other”). Higher scores indicated a stronger identification with the group that supports the respondent’s position toward abortion. For further calculations, these scores were centered around the mean. Like in the Leach et al. (2008) study, both dimensions of ingroup identification were substantively positively correlated ( $r = .57$ ,  $p < .01$ ). None of the two dimensions of ingroup identification significantly differed among the two experimental conditions or among pro-choice and pro-life group members.

## Results

Manipulation checks confirmed that the manipulation of status was successful. On a 7-point scale ranging from 1 (*completely disagree*) to 7 (*completely agree*), participants in the high status group believed to a greater extent that the “majority of higher educated people in Europe” ( $M = 5.14$ ,  $SD = 1.09$ ) and “most people” ( $M = 4.48$ ,  $SD = 1.24$ ) in general understood their arguments about the abortion debate more than participants in the low status group (“higher educated people in Europe”  $M = 4.05$ ,  $SD = 1.39$ ,  $t(201.36) = 6.26$ ,  $p < .01$ , Cohen's  $d = .87$ ; “most people”  $M = 4.12$ ,  $SD = 1.20$ ,  $t(202) = 2.11$ ,  $p < .05$ , Cohen's  $d = .30$ ). Accordingly, participants in the high status condition perceived greater group status and prestige than participants in the low status condition.

Hypothesis 1 focused on the basic HME and predicted a simple effect of group membership (pro-choice vs. pro-life) on perceived message tendency (PMT). Hypothesis 2

predicted that this effect was moderated by the self-investment but not the self-definition dimension of ingroup identification. Both hypotheses were tested in two separate moderated regressions, one for each dimension of ingroup identification. Respondents' position toward abortion (pro-life or pro-choice) and the ingroup identification dimension (centered around the mean) were entered as predictors of PMT in a first step of the regression, the interaction term (pro-choice / pro-life X ingroup identification dimension) was entered in a second step of the regression. No covariates were added.

The first regression examined the moderating influence of the self-investment subdimension of ingroup identification. Results of the first step,  $R^2 = .04$ ;  $F(2, 201) = 4.61$ ;  $p < .05$ , show that stance toward abortion had a significant effect on PMT,  $b = -.23$ ,  $SE = .08$ ,  $t = -2.81$ ,  $p < .01$ . This result confirmed Hypothesis 1 and showed that, in line with the results from Study 1, there were significant differences in how both pro-choice ( $M = -.13$ ) and pro-life ( $M = .33$ ) partisans perceived the newspaper article as relatively less agreeable toward their own side.<sup>6</sup> Self-investment had no significant effect on PMT,  $b = .04$ , *ns*. However, the effect of stance toward abortion on PMT was qualified by the self-investment dimension of ingroup identification, as indicated by a significant interaction term,  $b = -.13$ ,  $SE = .06$ ,  $t = -2.29$ ,  $p < .05$ , obtained in the second step of the moderated regression,  $\Delta R^2 = .02$ ;  $\Delta F = 5.26$ ;  $p < .05$ . The effect of this moderation was small,  $f^2 = .021$ . We carried out additional simple slope analyses to examine the effect of stance toward abortion on PMT on high (1 *SD* above mean of self-investment) and low (1 *SD* below mean of self-investment) levels of the moderator (see Figure 3). We found no significant effect at low levels of self-investment,  $b = -.03$ , *ns*. At high levels of self-investment, however, the effect of pro-life / pro-choice on PMT was highly significant,  $b = -.35$ ,  $SE = .10$ ,  $t = -3.64$ ,  $p < .01$ . Johnson-Neyman regions of significance showed that self-investment moderated the effect of stance toward abortion on PMT at self-investment scores of

and above  $-.21$ . These results confirm H2 and show that the HME only occurred among group members with higher levels of self-investment in their ingroup. Only if self-investment was higher, did pro-life and pro-choice partisans perceive the message tendency of the article to be significantly different and as relatively less agreeable toward their own position.

The second regression examined the moderating influence of the self-definition subdimension of ingroup identification. In the first step of the regression,  $R^2 = .21$ ,  $F(2, 201) = 4.71$ ,  $p < .05$ , stance toward abortion again predicted PMT,  $b = -.23$ ,  $SE = .08$ ,  $t = -2.87$ ,  $p < .01$ , whereas self-definition did not,  $b = -.04$ , *ns*. The second step of the regression,  $\Delta R^2 = .01$ ,  $\Delta F = 2.07$ , *ns*, yielded no significant interaction term,  $b = -.08$ , *ns*. These results confirm H2 and suggest that the self-definition subdimension of ingroup identification does not moderate the HME. An additional analysis employing the SPSS PROCESS macro by Hayes (2012) showed that if both subdimensions of ingroup identification were simultaneously entered as independent, additive moderators (PROCESS model 2), the moderating effect of self-investment turned marginally significant ( $b = -.12$ ,  $p = .07$ ), whereas the moderating effect of self-definition did not ( $b = -.02$ ,  $p = .80$ ).

The moderating effect of group status on the relation between pro-life or pro-choice and PMT postulated in Hypothesis 3 was examined in another moderated regression. PMT was regressed on stance toward abortion (pro-life / pro-choice) and group status (both contrast-coded) in a first step and the interaction term of both variables in a second step. The first step of the regression,  $R^2 = .05$ ,  $F(2, 201) = 4.78$ ;  $p < .01$ , yielded again a significant effect of stance toward abortion on PMT,  $b = -.23$ ,  $SE = .08$ ,  $t = -2.90$ ,  $p < .01$ , whereas the conditional effect of group status on PMT was not significant,  $b = .06$ , *ns*. However, the second step of the regression,  $\Delta R^2 = .02$ ;  $\Delta F = 4.87$ ;  $p < .05$ , yielded a significant interaction effect,  $b = .17$ ,  $SE = .08$ ,  $t = 2.20$ ,  $p < .05$ . The size of this moderation was small,  $f^2 = .022$ . Results of the simple slopes analysis of

the obtained interaction effect are displayed in Figure 4. The analysis shows that the PMT of pro-life and pro-choice partisans did not significantly differ in the high ingroup status condition,  $b = -.04$ ,  $ns$ . However, in the low ingroup status condition, pro-life and pro-choice partisans perceived the message tendency of the article to be significantly different and as relatively less agreeable toward their own position,  $b = -.39$ ,  $SE = .11$ ,  $t = -3.64$ ,  $p < .01$ . This finding confirms Hypothesis 3 and shows that only group members that believed that their ingroup had a lower status in society revealed a HME. An additional analysis showed that this result did not change if the two components of ingroup identification were added as covariates. Furthermore, dropping treatment noncompliers, i.e., participants that did not perceive a high or low ingroup status as expected based on their assigned condition, from the complete analyses of Study 2 led to the same and even pronounced results.<sup>7</sup>

### Overall Discussion

The present approach understood the HME as an intergroup phenomenon. We argued that the mass media coverage about a conflict may posit an ingroup threat to partisans, i.e., highly involved group members. Partisans may cope with this symbolic threat by perceiving the mass media coverage as unfairly biased and less favorable toward their group. They may be particularly prone to demonstrate the HME if they strongly identify with one group and believe that this group has less status in society than a competing one. The present approach examined these assumptions in the context of the abortion debate. In two empirical studies comparatively weak but significant and stable moderations were obtained that confirmed the influence of ingroup identification and group status on the formation of the HME. Pro-choice and pro-life group members demonstrated a HME if they perceived their ingroup to have a lower status or if they strongly identified with their ingroup. Results of Study 2 further clarified the role of ingroup identification and showed that partisans' self-investment in an ingroup (i.e., solidarity,

satisfaction, centrality of ingroup; Leach et al., 2008) is an especially important precursor of the HME.

### **Study Implications and Suggestions for Future Research**

**Ingroup identification.** The present results suggest that ingroup identification exerts a profound influence on the HME. This finding complements and extends existing studies that have shown ingroup identification to influence the HME (Ariyanto et al., 2007; Dalton et al., 1998; Duck et al., 1998; Eveland & Shah, 2003; Matheson & Dursun, 2001). Past studies confirmed that ingroup identification influences the HME in the context of ethnic and political conflicts; the present study complements these insights by confirming the relationship in the context of conflict about abortion. A degree of ingroup identification seems to be necessary in the formation of the HME. High ingroup identification is typical for partisans, and it may be especially pronounced among active members of institutionalized groups (e.g., listed associations that maintain a website, etc.). This explains why past studies that analyzed samples of non-partisans, for example in the context of the abortion debate, struggled to document the HME (e.g., Giner-Sorolla & Chaiken, 1994).

Additionally, the present approach demonstrates that the HME hinges on the self-investment dimension of ingroup identification (solidarity, satisfaction, and centrality; Leach et al., 2008), whereas the self-definition dimension (self-stereotyping, ingroup homogeneity) seems to be unrelated to the HME. Self-investment components of ingroup identification reflect the emotional attachment to an ingroup of which an individual wants to be a member; members with a high investment in their ingroup derive their self-worth from that group membership. Accordingly, they appear more sensitive to the perception of group threats and seem particularly prone to defend their ingroup against criticism and other threats (Leach et al., 2008). Therefore, partisans with a strong self-investment in their ingroup may be especially prone to reveal a HME.



Vallone et al. (1985) suggested that the HME is a biased perception that builds on partisans' tendency to consider any mediated account of reality that is not totally supportive of their position as faulty. Partisans with a high self-investment in their ingroup may apply especially high standards to media coverage about their group (Eveland & Shah, 2003) in order to protect their self-worth. Future studies may further explore the link between ingroup identification, self-worth, and the HME. The present findings suggest that it may be also difficult to reproduce the HME in minimal group studies create artificial groups but often struggle to trigger a strong self-investment component of ingroup identification in participants.

**Status.** The present studies suggest that ingroup status plays an important role in the formation of the HME, too. The HME may occur in particular, if not only, among members of low status groups. So far, only preliminary evidence for this assumption has been provided by a non-experimental study by Duck et al. (1998). This study relied on the (expected) election outcome of a political party to infer group status. The present approach is the first to confirm the influence of group status on the HME based on a direct assessment of perceived group status (Studies 1 and 2) and an experimentally controlled design (Study 2). The findings suggest that members of lower status groups already struggle to maintain a positively distinct group membership (Henry, 2009). They are, therefore, especially sensitive toward additional ingroup threats imposed by media coverage. Accordingly, the HME may occur particularly among groups that maintain a low social standing or prestige in society (because of ideological, economic, or other factors; Tajfel & Turner, 1979).

However, not all status differences may equally affect the HME. The HME seems to evolve around diverging notions about how things actually are ("the truth") or how they should be ("norms"). Groups may form around these diverging notions (as in the abortion debate). Group-conflict arises from a struggle about the right position (Tajfel & Turner, 1979), and

rightness may be commonly inferred from the subjective perception that a societal majority supports a group's position. Accordingly, of all possible aspects that may establish intergroup status differences, the perceived societal consensus with a group's position may be most relevant to the HME. Future research may further examine if the status difference that is based on the perceived societal consensus with a group's position is indeed more relevant to the HME than status differences based on other comparison dimensions (like economic or cultural capital, etc.).

In addition, the effect of status differences on the HME may eventually depend on perceived legitimacy and stability (e.g., Duck et al., 1998). Competitive or defensive intergroup behavior that may trigger the HME is more likely if status differences are perceived as unstable (Tajfel & Turner, 1979). Low status groups are more likely to challenge a status difference if they perceive it as unstable and illegitimate. If a status difference is perceived as unstable, even high-status groups may feel threatened and motivated to enhance the legitimacy of their higher status by defending their group's position. If the status hierarchy is perceived as stable and legitimate, however, low status group members are more likely to engage in non-competitive strategies (e.g., leaving the group, stressing alternative comparison dimensions; Tajfel & Turner, 1979). Future studies should examine the effect of perceived stability and legitimacy of status differences on the HME more fully.

In summary, the present findings about the role of ingroup identification and group status speak for a conceptualization of the HME as an intergroup phenomenon. Social identity theory provides a rich source to derive important follow-up studies that may further examine the HME as an intergroup phenomenon. For example, consequences of the HME have been rarely examined (Rojas, 2010; Tsfaty, 2007). However, notions about the development of intergroup polarization in intergroup conflicts (Tajfel & Turner, 1979) may be fruitfully applied to study consequences of the effect. For example, it may be argued that the HME enhances ingroup

favoritism among group members that contributes, in the long run, to intergroup polarization via a stronger idealization of the ingroup and a stronger derogation of the outgroup (e.g., Reid, 1983). This could imply that balanced mass media coverage may have a limited potential to resolve societal intergroup conflicts especially among those groups that are most strongly involved in a conflict.

**Limitations.** Of course, the present findings have to be interpreted within the limitations of the approach. First, in Study 1 we encountered the problem that certain institutions denied participation in or promotion of the study, because they already perceived the study itself as being biased toward opposing sides. This effect may have lead to a systematic dropout especially among highly involved groups and, therefore, to an underestimation of the HME in Study 1. However, as the dropout may have affected both pro-choice and pro-life groups equally, the resulting bias was probably marginal. Nevertheless, future studies that target highly involved partisans by approaching related institutions may consider the use of cover stories that cloak the actual purpose or content of a study more effectively, but of course, within the guidelines of ethical research. This strategy may circumvent the problem that institutions become suspicious and unwilling to cooperate.

Second, Study 2 examined the role of status among a Dutch sample of pro-choice or pro-life partisans, but it did not take pre-existing status beliefs into account. However, a great majority of the Dutch population supports the availability of abortion; accordingly, pro-life partisans may have generally perceived themselves as members of a minority, and, thus, of a lower status group. The outcome of the manipulation would have been more systematically controlled if pre-existing status beliefs were taken into account. Follow-up experimental studies should, therefore, assess pre-existing status beliefs and systematic differences between groups before and after the experimental manipulation.

In sum, the present studies show that ingroup identification and group status are important determinants of the HME. The findings support the conceptualization of the HME as an intergroup phenomenon.

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### Footnotes

<sup>1</sup> The literature reveals two slightly different conceptualizations of the HME; an absolute HME and a relative HME (Gunther, Christen, Liebhart, & Chia, 2001; Schmitt, Gunther, & Liebhart, 2004). The absolute HME is defined as the perception of partisans that identical media coverage is *in favor* of the opposing side (and, therefore, against their own side). An absolute HME is usually inferred directly (e.g., Eveland & Shah, 2003) or indirectly if members of two opposing groups perceive identical media coverage as being more favorable toward the opposite group (or less agreeable toward the own group), and if the perceived message tendency of each group significantly differs from the perception of media coverage as neutral and impartial (which is usually indicated by a properly labeled "neutral midpoint" on a continuous scale; e.g., see Duck et al., 1998; Hoffner & Rehkoff, 2011; Matheson & Dursun, 2001). In contrast, the relative HME is already inferred if members of two opposing groups perceive identical media coverage as being *more* favorable toward the opposite group (or *less* agreeable toward the own group, e.g., see Giner-Sorolla & Chaiken, 1994; Gunther & Liebhart, 2006; Vallone et al., 1985). The present approach focuses on the relative HME.

<sup>2</sup> We applied the following transformation to shrink the 11-point scale onto the 7-point scale:  $\text{min\_scale2} + ((\text{value\_scale1} - \text{min\_scale1}) / (\text{max\_scale1} - \text{min\_scale1})) * (\text{max\_scale2} - \text{min\_scale2})$ ; with scale1 = 11-point scale; scale2 = 7-point scale; min = lower endpoint of scale, max = higher endpoint of scale, value = observed value.

<sup>3</sup> Next to this relative HME, the PMT of pro-choice partisans also significantly differed from zero (i.e., perception of the article as impartial), indicating an *absolute* HME,  $t(55) = -3.9, p < .01$ , Cohen's  $d = .52$ . In contrast, pro-life partisans did not reveal an absolute HME in Study 1,  $t(51) = 1.11, ns$ , Cohen's  $d = .15$ . As the total sample mean of perceived message tendency suggests ( $M = -.37$ ), the present article was not totally balanced, but slightly slanted towards pro-

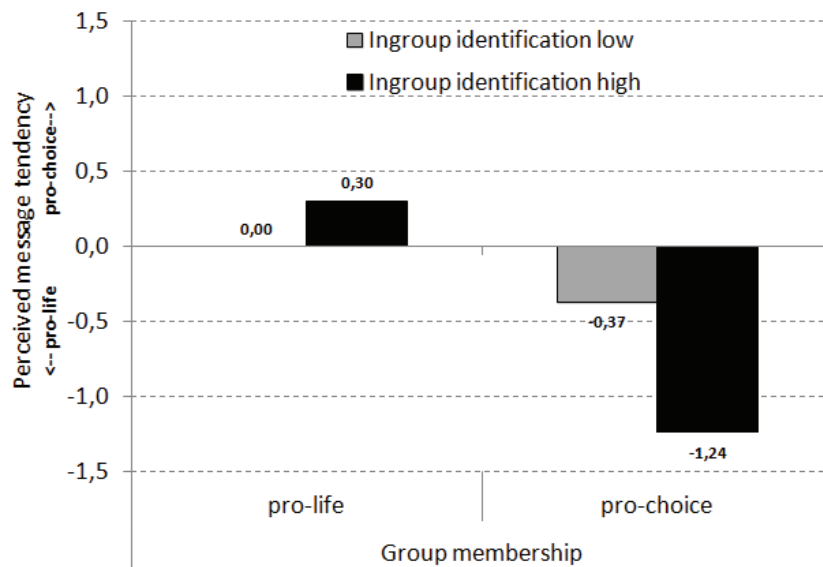
life. This may explain why pro-life respondents (the group with a lower perceived status in the present sample) eventually perceived the article as being only slightly impartial and biased toward pro-choice. In fact, if PMT scores are tested against the sample mean of  $-.37$ , pro-choice partisans show no absolute HME,  $t(55) = -1.76$ ,  $ns$ , Cohen's  $d = .24$ , whereas pro-life partisans show an absolute HME,  $t(51) = 3.55$ ,  $p < .01$ , Cohen's  $d = .49$ .

<sup>4</sup>  $f^2$  (Aiken & West, 2001) is the most common measure of effect size in tests of moderation. We calculated this effect size following Cohen (1988) as  $f^2 = (R^2_{\text{model with moderator}} - R^2_{\text{model without moderator}}) / 1 - R^2_{\text{model with moderator}}$ , respectively as  $\Delta R^2 / 1 - R^2$ . In the present approach, we refer to Cohen's (1988) suggestion that  $f^2$  effect sizes of 0.02, 0.15, and 0.35 can be termed small, medium, and large, respectively.

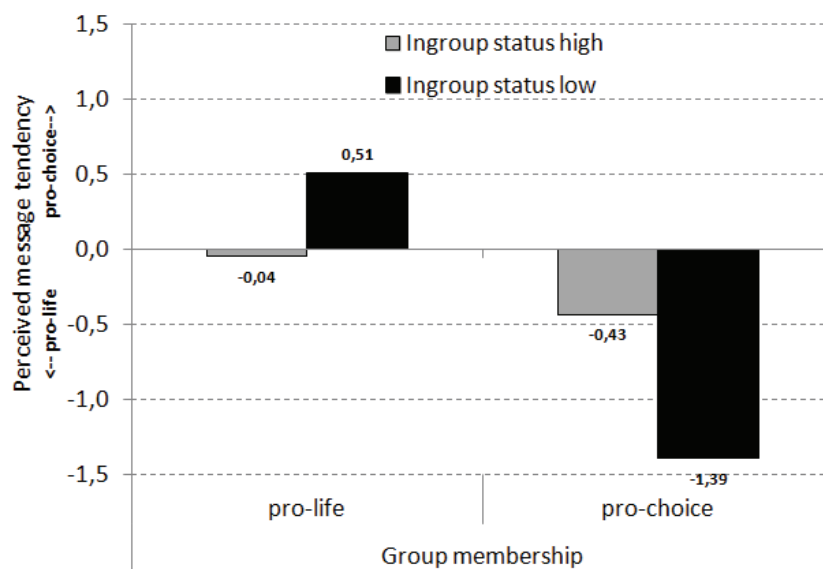
<sup>5</sup> We also explored if the moderating influence of status would depend on the extent of ingroup identification. However, using the SPSS PROCESS macro (model 3) by Hayes (2012), we obtained no significant three-way interaction between group affiliation, status, and identification ( $b = -.14$ ,  $ns$ ).

<sup>6</sup> The PMT of both groups also significantly differed from zero (i.e., perception of article as impartial), thus indicating an *absolute* HME; pro-choice:  $t(171) = -2.16$ ,  $p < .05$ , Cohen's  $d = .17$ ; pro-life  $t(31) = 2.06$ ,  $p < .05$ , Cohen's  $d = .36$ .

<sup>7</sup> Like in Study 1, we also explored if the moderating influence of status would depend on the extent of ingroup identification. However, results obtained with the SPSS PROCESS macro (model 3) by Hayes (2012) yielded no significant three-way interaction between group affiliation, status, and either the self-investment ( $b = .06$ ,  $ns$ ) or self-definition ( $b = .06$ ,  $ns$ ) component of ingroup identification.



*Figure 1.* Effect of ingroup identification on the HME. Displays estimated means of PMT derived from simple slope analyses. The HME is indicated by the diverging PMT of pro-life vs. pro-choice group members.



*Figure 2.* Effect of perceived ingroup status on the HME.

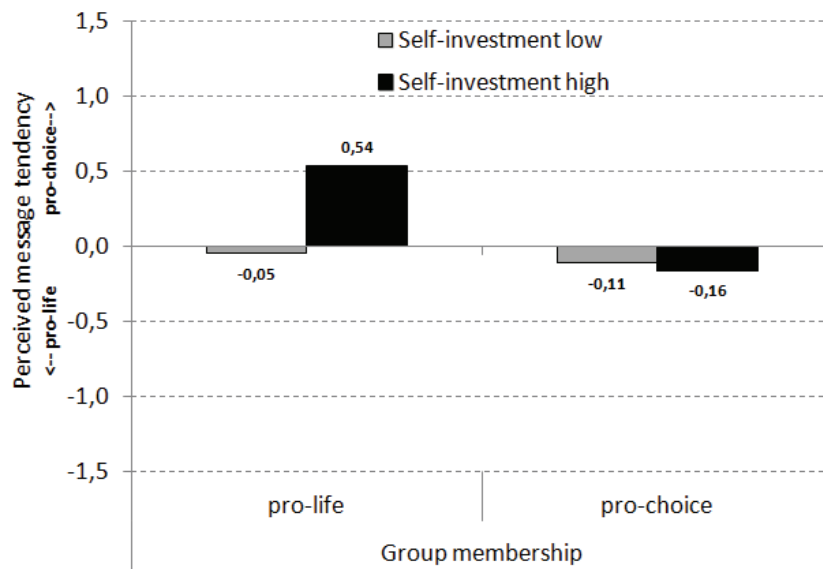


Figure 3. Effect of the self-investment dimension of ingroup identification on the HME.

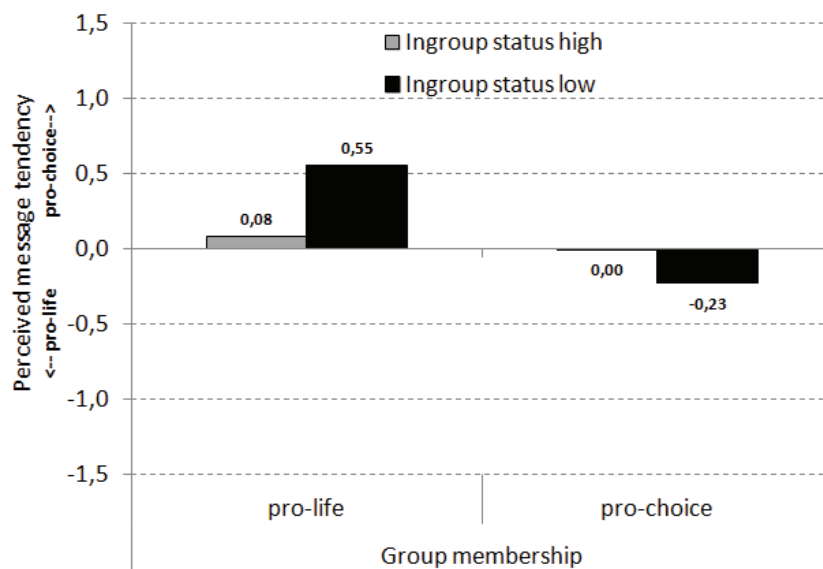


Figure 4. Effect of (experimentally manipulated) ingroup status on the HME.